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THE NORTHERN ROCK MOUSE, *PEROMYSCUS NASUTUS* (MAMMALIA: RODENTIA), FROM THE DAVIS MOUNTAINS, TEXAS

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The northern rock mouse (*Peromyscus nasutus*) has a rather unusual geographic distribution in the Trans-Pecos region of Texas, occurring in several disjunct areas. Schmidly (1977) mapped two places of occurrence of *P. nasutus* in the Franklin Mountains, El Paso County, three localities in the Guadalupe Mountains, Culberson County, one site in the Chinati Mountains, Presidio County, and one locality in the Chisos Mountains, Brewster County. Stangl et al. (1994) examined specimens only from the Guadalupe Mountains. A record for Jeff Davis County was reported by Davis and Schmidly (1994); however, one of us (DJS) has examined that specimen and confirmed that it is a *P. boylii* and not a *P. nasutus*. Therefore, the northern rock mouse has been reported to occur only at a total of seven disjunct localities in four counties of the Trans-Pecos region.

On 7 November 1998, we obtained two specimens of *P. nasutus* (non-pregnant females) on the Mount Livermore Preserve, Davis Mountains, Jeff Davis County, Texas (UTM coordinates 13579953E 3389870N). The mice were trapped among rocks on north-facing slopes of Mount Livermore. The dominant vegetation was a pine-oak-juniper woodland, with

some ferns and mosses and a layer of litter composed mostly of pine needles and oak leaves present among the rocks. This capture site is typical of habitats where *P. nasutus* has been found elsewhere in the region, however, Stangl et al. (1994) reported two specimens from a rocky area adjacent to a hillside with lechuguilla (*Agave lechuguilla*) and sotol (*Dasylirion* sp.), which they considered as atypical habitat for *P. nasutus*. Other species of mammals collected in the vicinity on Mount Livermore included the brush mouse (*P. boylii*) and western harvest mouse (*Reithrodontomys megalotis*). However, these species were not taken in the moist, rocky areas where *P. nasutus* was found; this separation of ecological niches was discussed by Schmidly (1977) and Davis and Schmidly (1994).

We agree with Carleton (1989) with regard to use of the name *P. nasutus* for the northern rock mouse. This arrangement was accepted by Davis and Schmidly (1994), Jones et al. (1997), and Manning and Jones (1998), however, Stangl et al. (1994) chose to retain the name *P. difficilis* to refer to this form. The systematic relationships of subspecies of *P. nasutus* in Texas is not clear. The subspecies recognized currently are *P. n. nasutus* (J.A. Allen, 1891) from the

Guadalupe Mountains of Culberson County, and *P. n. penicillatus* Mearns, 1896, from Brewster, Presidio, and El Paso counties (Manning and Jones, 1998). Additional analyses are needed in order to determine the subspecific affinities of the northern rock mice from the Davis Mountains in Jeff Davis County, Texas.

The specimens of *P. nasutus* from the Davis Mountains reported above (TTU 78316, 78317), as well as frozen tissues (TK 83756, 83590), and a karyotype of one specimen (TTU 78317), are deposited in the collection of Recent Mammals in the Natural Science Research Laboratory, the Museum of Texas Tech University.

Specimens were collected from the Mount Livermore Preserve in accordance with scientific collecting permits issued by the Texas Parks and Wildlife Department (permit number SPR-0790-189 and SPR-0393-593). Access and permission to work on the Mount Livermore Preserve were granted by the Nature Conservancy of Texas (John Karges and Jason Wrinkle). Financial support was provided through a partnership between the nature Conservancy of Texas and Texas Tech University. Collection and preparation of specimens was with the assistance of Irene Tiemann, Melinda Clary, Cole Matson, and Justin Bryan. Karyotypic analysis was conducted by Brenda Rodgers and Robert Baker.

LITERATURE CITED

- Carleton, M.D. 1989. Systematics and evolution. Pp. 7-141 in *Advances in the study of Peromyscus (Rodentia)*, G.L. Kirkland, Jr., and J.N. Layne, eds., Texas Tech Univ. Press, Lubbock, iv + 367 pp.
- Davis, W.B., and D.J. Schmidly. 1994. *The mammals of Texas*. Texas Parks and Wildlife Department, Austin, x + 338 pp.
- Jones, C., R.S. Hoffman, D.W. Rice, M.D. Engstrom, R.D. Bradley, D.J. Schmidly, C.A. Jones, and R.J. Baker. 1997. Revised checklist of North American mammals north of Mexico, 1997. *Occas. Papers, Mus., Texas Tech Univ.*, 173:1-19.
- Manning, R.W., and C. Jones. 1998. Annotated checklist of Recent land mammals of Texas, 1998. *Occas. Papers, Mus., Texas Tech Univ.*, 182:1-20.
- Schmidly, D.J. 1977. *The mammals of Trans-Pecos Texas including Big Bend National Park and Guadalupe Mountains National Park*. Texas A&M Univ. Press, College Station, xiii + 225 pp.
- Stangl, F.B., Jr., W.W. Dalquest, and R.R. Hollander. 1994. Evolution of a desert mammalian fauna: A 10,000-year history of mammals from Culberson and Jeff Davis counties, Trans-Pecos Texas. *Midwestern State Univ. Press, Wichita Falls, Texas*, xix + 264 pp.

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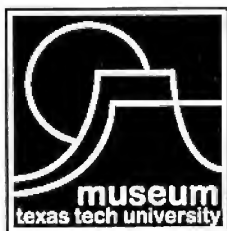
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PUBLICATIONS OF THE MUSEUM OF TEXAS TECH UNIVERSITY

It was through the efforts of Horn Professor J Knox Jones, as director of Academic Publications, that Texas Tech University initiated several publications series including the Occasional Papers of the Museum. This and future editions in the series are a memorial to his dedication to excellence in academic publications. Professor Jones enjoyed editing scientific publications and served the scientific community as an editor for the Journal of Mammalogy, Evolution, The Texas Journal of Science, Occasional Papers of the Museum, and Special Publications of the Museum. It is with special fondness that we remember Dr. J Knox Jones.

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